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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dirk Auf Der Heide

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ProPat

Klaus Schweitzer

425-C South Sharon Amity Road

Charlotte, NC 28211

EXAMINER

JACOBSON, MICHELE LYNN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/570,930	Applicant(s) AUF DER HEIDE ET AL.	
	Examiner MICHELE JACOBSON	Art Unit 1782	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 12-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Examiner Notes

1. Any objections and/or rejections made in the previous action, and not repeated below, are hereby withdrawn.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-8 and 12-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

4. Claims 1 and 13 have been amended to recite the limitation "a time of action of the liquid smoke of at least 5 days is not performed prior to shirring". Applicant asserts in the remarks submitted 12/223/10 that this limitation is supported by pg. 7, lines 19-21 of the application as filed which states "A time of action of the liquid smoke of at least 5 days, as described in the DE-A as essential, is not necessary." This passage does not

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mention shirring at all. Applicant's specification recites that the sausage casing disclosed may be shirred, but never states any relationship between the time of action of the liquid smoke and shirring of the sausage casing. Therefore, this limitation is not supported by applicant's disclosure as filed and constitutes new matter. Claims 2-8, 12, 14 and 15 all depend from independent claim 1 and necessarily incorporate the new matter limitations of claim 1. Therefore, claims 2-8, 12, 14 and 15 are also rejected for containing new matter.

5. Claims 1-8 and 12-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 1 and 13 have been amended to recite the limitation "a time of action of the liquid smoke of at least 5 days is not performed prior to shirring". There is insufficient antecedent basis for the term "shirring" in these claims since the food casing of claims 1 and 13 is never positively recited to be shirred. Since shirring is never positively recited any limitations regarding what has been done to the sausage casing prior to shirring are irrelevant and will not be considered to limit the food casing claimed in claims 1 and 13. Claims 2-8, 12, 14 and 15 all depend from independent claim 1 and necessarily incorporate the indefinite limitations of claim 1. Therefore, claims 2-8, 12, 14 and 15 are also rejected as being indefinite. Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-8 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krallman et al. U.S. Patent Application Publication No. 2003/0059502 (hereafter referred to as Krallman) and Stenger et al. U.S. Patent No. 5,399,427 (hereafter referred to as Stenger) and Ramesh et al. U.S. Patent No. 6,221,410 (hereafter referred to as Ramesh) and Erk et al. U.S. Patent No. 4,897,295 (hereafter referred to as Erk).

9. Krallman teaches a smoke-impregnated at least three-layer tubular film with a polyamide inner and outer layer that gives the finished sausage a smoke flavor. (Para. 13, 26) The casing may be biaxially oriented and shrinkable. (Para. 14) The liquid smoke emulsion that is coated on the inside of the tubular casing is recited to comprise liquid smoke, browning agents and optionally water. (Para. 16-20) The mixture is recited to be applied to the interior surface of the tubular casing using the art-recognized bubble technique. (Para. 30) Useful polyamides for the layers of the invention are recited to be nylon 6 and partially aromatic copolyamide. (Para. 41)

10. Krallman is silent regarding the water vapor permeability of the polyamide layers, and the thickness of the polyamide films.

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11. Stenger et al. teaches a polyamide 6 single layer sausage casings composed of nylon 6 having a thickness of 39-41 μm and a water vapor permeability of 20 $\text{g/m}^2/\text{day}$. (Table 1, comparative example 1) Stenger also recites that sausage casings with too high of a water vapor permeability lead to undesirable weight losses and drying of the sausage. (Col. 1, lines 60-64)

12. Krallman and Stenger both teach polyamide 6 sausage casings comprising Nylon 6. As evidenced by Stenger, the polyamide sausage casing of Krallman would be expected to exhibit a water vapor permeability of 20 $\text{g/m}^2/\text{day}$ and likely less since the casing of Krallman would be comprised of two layers of polyamide.

13. Regarding the water vapor permeability values recited in claims 1 and 4: The casing recited by Krallman would inherently have a water vapor permeability of 20 $\text{g/m}^2/\text{day}$ and likely less as evidenced by Stenger.

14. Regarding the exclusion of a browning agent in claims 1 and 13: Although Krallman recites that the composition impregnating the polyamide sausage casing of the invention should include a browning agent, it would have been obvious to one having ordinary skill in the art at the time the invention was made to delete the browning agent from the solution in order to lower costs of the composition by requiring less materials. It would have additionally been obvious to delete the browning agent when an increase in the brown color of the sausage was not desired. As stated in MPEP 2144.04 "Omission of an element and its function is obvious if the function of the element is not desired".

15. Krallman is silent regarding the surface energy of the sausage casing recited.

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16. Ramesh teaches that it is known that a polar surface is needed for adhesion of a film to a meat product. Adhesion of the film to the meat is frequently needed in order to prevent "purge", i.e., "cook-out", which can occur during the cooking of the meat packaged in the film if the film does adhere to the meat during cook-in. A polar film surface can be provided by using: (a) polar resin in the film layer in contact with the meat, **and/or** (b) surface modification, such as corona treatment, of the film surface in contact with the meat. Typically, polar polymers used for meat adhesion include: ethylene/unsaturated acid copolymer, anhydride-containing polyolefin, and polyamide. (Col. 2, lines 13-24)

17. Krallman and Ramesh are both directed towards sausage casings. Ramesh evidences that it was well known in the sausage casing art that the interior of a sausage casing needs to have a high adhesion to the meat encased. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have corona treated the interior surface, as taught by Ramesh, of the polyamide sausage casing of Krallman in order to produce a casing with improved meat adhesion properties in addition to the adhesion provided by the use of a polar polymer.

18. Regarding the values of surface energy recited in claims 1, 2 and 13 and the corona treatment recited in claim 8: Corona treating as recited by Ramesh would have inherently produced a corona treated polyamide sausage casing as claimed in claim 8 with surface energy values such as those recited in claims 1, 2 and 13. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized the amount of corona treatment in order to obtain the most beneficial

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properties of adhesion. Such an optimization would have resulted in a casing such as claimed in claims 1, 2 and 13.

19. Krallman is silent regarding the swelling value of the polyamide inner layer of the casing.

20. Erk teaches polyamide sausage casings containing at least one polyamide which can absorb at least 5% of their own weight in water prior to saturation. (Col. 3, lines 5-10) A sausage casing that is treated with water prior to filling avoids the problems of the need for additional lubricating agent and provides a casing that can be filled to a constant diameter and that can be tied off and clipped without error and without any loss and so that the filled casings display no visible tightening folds. (Col. 2, line 65-Col. 3, line 2) It is particularly preferred that the casing consists of at least one of the polyamides 6, 6.6 or a mixture of PA-6 and PA 6.6. (Col. 4, lines 46-50) The casings produced are recited to have thicknesses between 25 to 100 μm . (Col. 5, lines 19-22)

21. Regarding the water swelling values in claims 1, 3 and 13: As evidenced by Erk, casings comprising Nylon 6 layers can absorb at least 5% of their own weight in water prior to saturation. This absorption of water is directly related to the swelling value of the food casing. Since the casing of Krallman is made of the same materials as claimed by applicant, and as evidenced by Erk would have good water absorbing capabilities, the casing of Krallman would inherently display a water swelling values as claimed in claims 1, 3 and 13.

22. Regarding the thickness values for the single and multilayer casings recited in claims 1 and 13: Since Krallman, Stenger and Erk are directed towards sausage

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casings it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized polyamide films close to the thicknesses recited by Stenger (about 40 μm) and Erk (25-100 μm) to produce the sausage casing recited by Krallman because this thickness was known in the art to be useful. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have varied the result effective variable of thickness of the polyamide layers depending on the strength required for the application the casing was being used for. Such an optimization of the thickness of the polyamide layers for the casing produced by the modification of Krallman as enumerated above would have resulted in the invention claimed in claims 1 and 13.

23. Regarding the intended use limitations of claim 1 and 13: Claims 1 and 13 recite that the food casing is “for smoked sausages that are not separately smoked”. This limitation is merely an intended use. Applicants attention is drawn to MPEP 2111.02 which states that intended use statements must be evaluated to determine whether the intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

24. It is the examiner’s position that the intended use recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art and further that the prior art structure is capable of performing the intended use. Given that Krallman discloses a sausage casing as presently claimed, it is clear

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that the sausage casing of Krallman would be capable of performing the intended use, i.e. containing smoked sausages that are not separately smoked, presently claimed as required in the above cited portion of the MPEP.

25. Regarding claim 5: It is well known in the sausage casing art to produce seamless polyamide casings. The liquid smoke material recited by Krallman is applied to the sausage casing in tubular form, therefore it would have been obvious to one of ordinary skill in the art to have utilized either a seamed or seamless polyamide casing for the invention of Krallman. Production of the corona treated invention of Krallman utilizing a seamless polyamide casing would have produced the invention as claimed in claim 5.

26. Regarding claims 6 and 7: Krallman recites that the sausage casing of the invention can be biaxially oriented and is shrinkable. It is well known in the sausage are to heat set shrinkable films and to minimize the residual shrinkage thereof. The optimization of the corona treated invention of Krallman according to these well known properties would have produced the invention as claimed in claims 6 and 7.

27. Regarding claim 12: Krallman and Stenger clearly recite using the polyamide casings recited for packaging sausage. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have packaged any sausage within the casing produced by the combination of Krallman with the teachings of Stenger such as those claimed in claim 12.

28. Regarding claim 14: Krallman discloses nylon 6 casings as claimed in claim 14.

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29. Regarding claim 15: It would have been obvious to one having ordinary skill in the art at the time the invention was made to have controlled the viscosity of the liquid smoke solution in order to facilitate the coating of the solution on the interior of the casing. Krallman specifically discloses that water is optionally present in the coating solution. Obviously, the presence or absence of water would affect the viscosity of the solution and therefore water is interpreted to read on the limitation of “an additive to set the viscosity” recited in claim 15.

Response to Arguments

30. Applicant's arguments filed 12/23/10 have been fully considered but they are not persuasive.

31. The examiner does not dispute applicant's assertions on page 8 of the remarks that Krallman recites the inclusion of browning agent in the casing coating solution. However, as stated above, there would have been numerous motivations for one of ordinary skill in the art to delete the browning agent disclosed. The deletion of the browning agent would still yield a casing suitable for its intended function, and would have been obvious to one of ordinary skill who did not desire the function of the browning agent. The assertion that Krallman “requires” a browning agent on page 9 of the remarks is not persuasive in light of the teachings of the art and the level of ordinary skill in the art.

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32. Applicant's assertions on pages 8 and 9 of the remarks regarding the amount of time the liquid smoke composition of Krallman is allowed to act on the casing is not germane because the instantly pending claims do not recite any definite limitations regarding the amount of time the smoke interacts with the casing prior to use.

Furthermore, the assertions regarding the amount of time of action of the liquid smoke composition on the inventive casing are product by process features that have not been shown to produce a materially different sausage casing than that produced by the modification of Krallman.

33. Applicant's assertions on page 9 regarding the desirability of brown coloring in smoked sausages as purported to be evidenced by "Exhibit 1" are not found persuasive. "Exhibit 1" merely states that smoked sausage is colored brown as a result of being smoked and makes absolutely no statements regarding what color is most desirable for smoked sausage. Applicant's assertion that "large pieces of meat should be smoked until "typical dark color" is obtained" is out of context. This quotation refers to "hams, bacons and loins, not sausage. Furthermore, "Exhibit 1" never mentions browning agent and instead discusses the color provided by actual smoking which imparts flavor (i.e. "long smoking with heavy smoke can overpower these subtle spice aromas [of sausage]), not artificial coloring provided by a browning agent. Therefore, applicant's assertion that "one skilled in the art would find sausages exhibiting an intense coloration to be highly desirable" is not found persuasive.

34. Furthermore, applicant has failed to provide a publication date for "exhibit 1" or any indication of where this publication was obtained. Therefore, even if "exhibit 1"

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were found persuasive, this document would be given very little weight. If applicant wishes this document to be fully considered by the examiner, applicant must submit an IDS and more information regarding this documents origins.

35. Applicant's assertion on pages 9 and 10 of the remarks that the deletion of browning agent would result in increased cost for the sausage casing of Krallman is not found persuasive. It is unclear to the examiner why a solution of liquid smoke would require more time to penetrate the sausage casing of Krallman than a solution of liquid smoke and browning agent. Applicant states that it would take more time for "a smoke emulsion of lesser color depth to sufficiently penetrate the casing". It is unclear to the examiner how the "color depth" of the solution is relevant. Liquid smoke provides flavor to the sausage and the same amount of liquid smoke would penetrate a sausage casing in the soak time of Krallman with or without browning agent. Therefore, applicant's assertion that "soak time" would be longer for a solution without browning agent is not found persuasive.

36. In response to applicant's arguments against the references individually on pages 11-17, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The obviousness rejection presented relies upon all of the references cited which are utilized to establish the level of ordinary skill in the art, the properties of materials used in the art and the motivations of one of ordinary skill in the art. Applicant's repeated assertions that the individual references fail to teach each and

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every element of the claimed invention individually are not relevant since they fail to take into account that the claims were rejected over a combination of references.

37. Applicant's assertion on page 11 that water is a "solvent rather than an additive" is not found persuasive. Applicant's specification fails to provide a definition for the term "additive" which excludes water. The examiner has therefore reasonably broadly interpreted the term "additive" to include water. Therefore applicant's assertion is not found persuasive.

38. Applicant appears to assert on page 16 of the remarks that the combination of references presented above requires the combination of every teaching of each reference. It is unclear what legal standard applicant is applying in asserting that the combination of the references cited by the examiner would "at best, have resulted in a casing having a polyolefin-containing inner layer that was soaked in a smoke solution containing browning agent for up to 10 days". As stated above, Stenger and Erk establish the properties of water vapor permeability and swelling value that would be expected for a polyamide casing such as disclosed by Krallman. Ramesh establishes that it was the level of ordinary skill in the art to provide corona treatment to sausage casings, including those comprising polyamide. Applicant's assertions about what these references additionally teach are not found persuasive to negate what these references would have fairly taught to one of ordinary skill in the art.

39. Applicant's assertions on page 17 regarding viscosity additives are not found persuasive. Claim 15 merely recites the "liquid smoke further comprises an additive to set the viscosity and thereby wet the liquid smoke on the inside of the casing uniformly".

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Claim 15 does not recite a "viscosity additive" and instead only recites an "additive to set the viscosity". It fails to recite what the viscosity is set to. Applicant has failed to present any evidence that the modification of Krallman would result in a casing in which the liquid smoke is not wet on the inside of the casing uniformly. Therefore, the examiner not persuaded that the combination of references presented above does not read on the limitations of claim 15.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-7 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michele L. Jacobson
Examiner /M. J./
Art Unit 1782

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1782